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ABSTRACT

Research designed to discover the effect of individual instruction and team teaching upon the academic growth of students in high school English during a six weeks summer school session is discussed. Two control and experimental groups were used. Results are given in tabular form. (CK)

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Title III, Co-Op STEP
Statistical Report Showing the Effect of Individual Instruction and Team Teaching Upon the Academic Growth of High School Students in English

by
Mrs. A. C. Trivette and Dr. Kinnard White*

In 1969, Title III, Co-Op STEP designed research intended to discover the effect of individual instruction and team teaching upon the academic growth of students in high school English during a six weeks summer school session.

Two Title I schools served as control groups (Group A Traditional). In these schools the English classes were organized in the traditional manner according to grade level. There was one teacher to a class of about 18 students. State adopted text books were used. Students in the controlled groups numbered 65 of whom 82% were repeating English. The ethnic and socio-economic composition of the control groups was comparable to that of the experimental group. The school population of all groups was prodominantly rural.

The experimental groups included 132 students of whom 67% were repeaters. These groups were organized in an essentially nongraded arrangement with teaching teams, made up of instructional specialists and teacher interns working with three groups of students.

Group B was Structured English in which the course objectives, units of study, and methods of lesson presentation were planned by the instructional team. No text books were used, but learning activity packages (LAPs) were developed by the teachers and given to the students. There was some large-group instruction, more small-group instruction, and individual instruction for each according to the particular weaknesses revealed by the student's pre test scores.

Group C classes were Unstructured English. Here students helped to determine objectives, units of study to be covered and methods to be used. Here again, as in the Structured English, class time was used for large-group instruction, small-group instruction and individual instruction using LAPs which were actually produced by students and teachers working cooperatively.

In Group D, Humanities, an interdisciplinary approach, English and Social Studies, was used and the learning packages were developed by the instructional teams. The approach to learning was essentially the

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same as in groups B and C, but the theme and units of study were not the same as in the Structured and Unstructured English. No text books were used. Much independent study was done by the students in the Humanities Group.

All students were pre tested using form Q of the Comprehensive Test of Basic Skills and administering the tests in Reading Vocabulary, Reading Comprehension, Study Skills (Reference), Study Skills (graphs, maps, etc.), Language, Mechanics, Language Expression and Language Spelling. All students included in this study were post tested using form R of CTBS.

Those students in the Experimental groups whose total scores on Reading fell below the 38th percentile, spent approximately 160 minutes a week in the Reading Lab with a reading specialist to guide their activities. Those whose score fell below the 38th percentile on total Study Skills received 40 minutes per week in the library under the instruction of the librarian. The reason for this lies in the theory that failure in English may be attributable to reading and/or study skill inadequancies.

The results of this study are tabulated in Tables 1, 2, and 3.

Table 1.
Mean I.Q., Mean Pre and Post Raw Scores, and Standard Deviation in Reading, Language, and Study Skills for Four Groups

Variables		Group (Control) A (65)* Traditional English	Experimental B (12)* Structured English	Experimental C (93)* Unstructured English	Experimental D (27)* Humanities
I.Q.	Mean I.Q.	87.369	92.583	90.667	87.889
	Standard Deviation	9.757	11.927	13.207	9.162
Reading	Mean, Reading Vocabulary (Pre-test)	18.738**	20.917	19.323	17.926
	S. D.	6.137	9.080	7.518	6.604
	Mean Reading Vocabulary 2 (Post-test)	18.062	21.917	20.151	18.370
	S. D.	7.024	9.268	7.997	7.652
	Mean Reading Comprehension (Pre-test)	20.185	21.250	21.591	20.259
	S. D.	7.303	7.448	8.661	5.815
	Mean Reading Comprehension (Post-test)	18.062	22.167	21.935	19.333
	S. D.	7.693	9.666	9.203	6.737
	Mean Total Reading (Pre-test)	38.646	42.167	41.269	38.185
	S. D.	12.770	15.649	16.149	11.593
	Mean Total Reading (Post-test)	36.092	44.083	42.000	37.704
	S. D.	13.270	18.002	15.895	13.301
Language	Mean Language Mech. (Pre-test)	10.954	13.667	13.204	13.111
	S. D.	4.453	4.735	9.544	4.475
	Mean Language Mech. (Post-test)	11.923	15.917	17.086	14.370
	S. D.	5.972	4.907	6.430	4.805
	Mean Language Exp. (Pre-test)	13.200	15.667	16.656	13.519
	S. D.	4.845	3.985	10.266	4.552
	Mean Language Exp. (Post-test)	12.646	17.167	17.140	15.074
	S. D.	5.541	6.520	6.641	5.053
	Mean Language Spell (Pre-test)	13.569	14.250	15.376	14.407
	S. D.	5.477	6.283	9.818	6.393
	Mean Language Spell (Post-test)	13.500	17.500	15.559	15.481
	S. D.	5.937	6.113	5.142	4.995

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	Mean Language Spell (Post-test)	13.500	17.500	15.559	15.481
	S. D.	5.937	6.113	5.142	4.995
	Mean Language Total (Pre-test)	37.554	43.583	41.495	41.037
	S. D.	12.456	11.285	13.647	12.368
	Mean Language Total (Post-test)	37.954	53.083	49.215	44.926
		14.690	14.362	13.736	11.884
Study Skills	Mean Study Skills Reference (Pre-test)	9.154	11.667	11.280	10.296
	S. D.	3.620	4.334	4.490	3.291
	Mean Study Skills (Ref)	7.185	8.750	8.441	7.667
	S. D. (Post-test)	3.553	3.769	3.518	2.587
	Mean S. S. (Graph)	12.508	13.417	14.698	12.481
	S. D. (Pre-test)	5.072	5.854	5.538	4.191
	Mean S. S. Graph	12.985	13.500	15.097	12.815
	S. D. (Post-test)	5.343	5.808	5.754	5.241
	Mean Total Study Skill	21.662	25.083	25.247	22.778
	S. D. (Pre-test)	7.928	9.501	9.065	6.750
	Mean Total Study Skill	20.169	22.250	23.538	20.481
	S. D. (Post-test)	8.013	9.077	8.322	7.154

*Number in each group for whom test information is complete.
**See Appendix A for possible scores on this test.

Forms Q and R of the California Test of Basic Skills are equated by percentile scores. For this reason, it will be meaningful to compare the pre and post test scores to determine the amount of the difference in terms of percentiles. This information is presented in Table 2.

Table 2
Mean Percentile Scores
in Reading, Study Skills, and Language
Totals - Pre and Post Tests and
Standard Deviation

Variables	Groups (Traditional) A	(Structured) B	(Unstructured) C	(Humanities) D
Reading Total	18.077	22.917	24.925	19.222
S. D. Pre-test	16.930	19.884	23.178	16.235
Reading Total	16.923	28.500	27.140	20.074
S. D. Post-test	18.440	24.408	24.711	16.765
Study Skills Total	17.385	27.333	30.172	19.615
S. D. Pre-test	17.525	25.812	25.492	15.497
Study Skills	22.308	27.917	33.753	24.222
S. D.	22.115	29.355	26.252	21.288
Language Total Pre test	15.908	22.000	24.667	21.556
S. D.	16.317	20.609	21.126	17.165
Language Total	13.923	30.833	31.011	21.963
S. D. Post test	18.912	26.236	25.308	17.293

Analysis of covariance was used to test the hypothesis of no difference among the organizational patterns of classes. For each post test criterion, the pre test score on the criterion measure and the student's I. Q. were used as covariates. This covariance adjustment controls for any differences between the groups on the post test that might have been attributable to either differential beginning points on the criteria under consideration or differences in general ability.

For purposes of program evaluation a probability level or .10 or less was considered as adequate to reject the hypothesis of no difference.

Table 3

Summary of Analysis of Covariance for Four Treatment Groups: Traditional, Structured, Unstructured, and Humanities, on Each of the Reading, Language, and Study Skills Scores with I.Q. and Pre-test Scores as Covariates.

Variables	F
Vocabulary	1.26
Comprehension	2.93*
Total Reading	2.48*
*****	
Study Skills Reference	0.18
Study Skills Graph	0.46
Study Skills Total	0.57
*****	
Language Mechanics	7.41*
Language Expression	4.63*
Language Spelling	2.47*
Language Total	9.65*

df = 3,191
*pl .10

By comparing the variables starred in Table 3 with the raw scores in Table 1 and the percentile scores in Table 2, it appears that the gains in Reading Comprehension, Total Reading, Language Mechanics, Language Expression, Language Spelling, and Language Total were significant with a likelihood that these differences were due to the treatment factor, team teaching with individualized instruction.

Much more research needs to be done along the lines of this study equalizing the size of each group and extending the time. A follow-up study is being planned to test for the Hawthorne Effect.